

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hauck *et al.*

Appl. No.: 09/107,371

Filed: June 30, 1998

For: **Chamber Mapping System**

Confirmation No.: 7909

Art Unit: 3739

Examiner: Cohen, Lee S.

Atty. Docket: 2384.0020007

Information Disclosure Statement under 37 C.F.R. § 1.97(b) (Part I)

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

This Information Disclosure Statement is being under 37 C.F.R. § 1.97(b) filed before the mailing of a first office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

Copies of documents **NPL1-NPL30** are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.

It is expected that the examiner will review the prosecution and cited art in the parent application no. 08/387,832 in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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Attorney for Applicants
Registration No. 54,179

Date: 5/15/07

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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (PART I) <i>(Use as many sheets as necessary)</i>				Application Number	09/107,371
				Filing Date	June 30, 1998
				First Named Inventor	John A. Hauck
				Art Unit	3739
				Examiner Name	Lee S. Cohen
Sheet	1	of	5	Attorney Docket Number	2384.0020007

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If Known)			
	US1	3,954,098	05-04-1976	Dick <i>et al.</i>	
	US2	4,173,228	11-06-1979	Van Steenwyk, <i>et al.</i>	
	US3	4,304,239	12-08-1981	Perlin	
	US4	4,380,237	04-19-1983	Newbower	
	US5	4,431,005	02-14-1984	McCormick	
	US6	4,444,195	04-24-1984	Gold	
	US7	4,478,223	10-23-1984	Allor	
	US8	4,559,951	12-24-1985	Dahl <i>et al.</i>	
	US9	4,572,186	02-25-1986	Gould <i>et al.</i>	
	US10	4,572,206	02-25-1986	Geddes <i>et al.</i>	
	US11	4,573,473	03-04-1986	Hess	
	US12	4,613,866	09-23-1986	Blood	
	US13	4,628,937	12-16-1986	Hess <i>et al.</i>	
	US14	4,641,649	02-10-1987	Walinsky <i>et al.</i>	
	US15	4,674,518	06-23-1987	Salo	
	US16	4,697,595	10-06-1987	Breyer, <i>et al.</i>	
	US17	4,706,670	11-17-1987	Andersen <i>et al.</i>	
	US18	4,721,115	01-26-1988	Owens	
	US19	4,777,955	10-18-1988	Brayton <i>et al.</i>	
	US20	4,821,731	04-18-1989	Martinelli, <i>et al.</i>	
	US21	4,840,182	06-20-1989	Carlson	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
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	FP1					
	FP2					
	FP3					
	FP4					
	FP5					
	FP6					
	FP7					
	FP8					
	FP9					

Examiner Signature		Date Considered	
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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				Examiner Name	Lee S. Cohen
Sheet	2	of	5	Attorney Docket Number	2384.0020007

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		Number-Kind Code ² (if Known)			
	US22	4,890,623	01-02-1990	Cook <i>et al.</i>	
	US23	4,898,176	02-06-1990	Petre	
	US24	4,898,181	02-06-1990	Kessler	
	US25	4,899,750	02-13-1990	Ekwall	
	US26	4,940,064	07-10-1990	Desai	
	US27	4,945,305	07-31-1990	Blood	
	US28	4,945,342	07-31-1990	Steinemann	
	US29	4,951,682	08-28-1990	Petre	
	US30	5,000,190	03-19-1991	Petre	
	US31	5,005,587	04-09-1991	Scott	
	US32	5,029,588	07-09-1991	Yock <i>et al.</i>	
	US33	5,042,486	08-27-1991	Pfeiler, <i>et al.</i>	
	US34	5,054,492	10-08-1991	Scribner, <i>et al.</i>	
	US35	5,054,496	10-08-1991	Wen, <i>et al.</i>	
	US36	5,056,517	10-15-1991	Fenici	
	US37	5,058,583	10-22-1991	Geddes <i>et al.</i>	
	US38	5,081,993	01-21-1992	Kitney, <i>et al.</i>	
	US39	5,090,411	02-25-1992	Higuchi	
	US40	5,158,092	10-27-1992	Glance	
	US41	5,161,536	11-10-1992	Vilkomerson, <i>et al.</i>	

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	FP12					
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	FP18					

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	US42	5,211,165	05-18-1993	Dumoulin, <i>et al.</i>	
	US43	5,220,924	06-22-1993	Frazin	
	US44	5,228,442	07-20-1993	Imran	
	US45	5,237,996	08-24-1993	Waldman <i>et al.</i>	
	US46	5,255,678	10-26-1993	Deslauriers <i>et al.</i>	
	US47	5,273,038	12-28-1993	Beavin	
	US48	5,282,471	02-01-1994	Sato	
	US49	5,295,484	03-22-1994	Marcus, <i>et al.</i>	
	US50	5,323,781	06-28-1994	Ideker, <i>et al.</i>	
	US51	5,324,284	06-28-1994	Imran	
	US52	5,305,745	04-26-1994	Zacouto	
	US53	5,325,860	07-05-1994	Seward, <i>et al.</i>	
	US54	5,341,807	08-30-1994	Nardella	
	US55	5,345,936	09-13-1994	Pomeranz <i>et al.</i>	
	US56	5,372,138	12-13-1994	Crowley, <i>et al.</i>	
	US57	5,377,678	01-03-1995	Dumoulin, <i>et al.</i>	
	US58	5,385,146	01-31-1995	Goldreyer	
	US59	5,391,199	02-21-1995	Ben-Haim	
	US60	5,409,000	04-25-1995	Imran	

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	US61	5,433,198	07-18-1995	Desai	
	US62	5,553,611	09-10-1996	Budd <i>et al.</i>	
	US63	5,551,426	09-03-1996	Hummel <i>et al.</i>	
	US64	5,558,091	09-24-1996	Acker, <i>et al.</i>	
	US65	5,588,432	12-31-1996	Crowley	
	US66	5,622,174	04-22-1997	Yamazaki	
	US67	5,662,108	09-02-1997	Budd <i>et al.</i>	
	US68	5,687,737	11-18-1997	Branham, <i>et al.</i>	
	US69	5,697,377	12-16-1997	Wittkamp	
	US70	5,701,897	12-30-1997	Sano	
	US71	5,713,363	02-03-1998	Seward, <i>et al.</i>	
	US72	5,722,402	03-03-1998	Swanson <i>et al.</i>	
	US73	5,738,096	04-14-1998	Ben-Haim	
	US74	5,824,005	10-20-1998	Motamedi <i>et al.</i>	
	US75	5,840,031	11-24-1998	Crowley	
	US76	5,846,198	12-08-1998	Killmann	

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	FP28					
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	US77	5,848,972	12-15-1998	Triedman <i>et al.</i>	
	US78	5,908,446	06-01-1999	Imran	
	US79	6,004,269	12-21-1999	Crowley, <i>et al.</i>	
	US80	6,095,976	08-01-2000	Nachtomy <i>et al.</i>	
	US81	6,603,996	08-05-2003	Beatty, <i>et al.</i>	
	US82	4,649,924	03-17-1987	Taccardi	
	US83	4,699,147	10-13-1987	Chilson <i>et al.</i>	
	US84	5,025,786	06-25-1991	Siegel	
	US85				
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NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T ²	
	NPL1	Arisi, G., <i>et al.</i> , "Localization Of Ectopic Ventricular Focuses By Means Of A Diameter Multielectrode Catheter," <i>Advances in Electrophysiology</i> , Elsevier Science Publishers B.V. (Biomedical Division), Z. Antaloczy et al., editors, pp. 67-70 (1990).		
	NPL2	Branham B., <i>et al.</i> , "A System For Accurate Interactive 3-D Display Of Cardiac Electrical Activity," <i>Computers in Cardiology</i> , IEEE Computer Society Press 0276-6547/92, pp. 335-338 (Oct. 11-14, 1992).		
	NPL3	Breyer, B. and CIKES, I., "Ultrasonically Marked Catheter - A Method For Positive Echographic Catheter Position Identification," <i>Med. & Biol. Eng. & Comput.</i> , 22:268-271 (May 1984).		
	NPL4	Buckles, D., <i>et al.</i> , "Computer-Enhanced Mapping Of Activation Sequences In The Surgical Treatment Of Supraventricular Arrhythmias," <i>PACE</i> , Vol. 13, Part I, pp. 1401-1407 (November 1990).		
	NPL5	Cikes, I., <i>et al.</i> , "Cardiac Catheterisation Guided By Ultrasound," <i>Journal of the American College of Cardiology</i> , Vol. 3, No. 2, p. 564 (February 1984).		
	NPL6	Cikes, I. and BREYER, B., "Complete Cardiac Catheterisation Guided By Ultrasound," <i>European Heart Journal</i> , vol. 4 (suppl. E), p. 21 (1983).		
	NPL7	Cikes, I., "Interventional Echocardiography," <i>5th Symposium on Echocardiography</i> , Rotterdam, Abstracts p. 38 (1983).		
	NPL8	Cikes, I., <i>et al.</i> , "Interventional Echocardiography," <i>Interventional Ultrasound</i> , 1st edition, chapter 25, Munksgaard, Copenhagen, pp. 160-168 (1985).		
	NPL9	Cox, J., <i>et al.</i> , "Surgery For Atrial Fibrillation," <i>Cardiac Surgery: State of the Art Reviews</i> , Vol. 4, No. 1, pp. 207-217 (1990).		
	NPL10	De Bakker, J., <i>et al.</i> , "Endocardial Mapping By Simultaneous Recording Of Endocardial Electrograms During Cardiac Surgery For Ventricular Aneurysm," <i>Journal of American College of Cardiology</i> , Vol. 2, No. 5, pp. 947-53 (Nov. 1983).		
Examiner Signature		Date Considered		

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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (PART I) (Use as many sheets as necessary)				Application Number	09/107,371
				Filing Date	June 30, 1997
				First Named Inventor	John A. Hauck
				Art Unit	3739
				Examiner Name	Lee S. Cohen
Sheet	2	of	3	Attorney Docket Number	2384.0020007

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T ²	
	NPL11	Derfus, D. and PILKINGTON, T., "Assessing The Effect Of Uncertainty In Intracavitary Electrode Position On Endocardial Potential Estimates," <i>IEEE Transactions on Biomedical Engineering</i> , Vol. 39, No. 7, pp. 676-681 (July 1992).		
	NPL12	Derfus, D., <i>et al.</i> , "Calculating Intracavitary Potentials from Measured Endocardial Potentials," <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , Vol. 12, No. 2, p. 635 (1990).		
	NPL13	Derfus, D., <i>et al.</i> , "A Comparison of Measured and Calculated Intracavitary Potentials for Electrical Stimuli in the Exposed Dog Heart," <i>IEEE Transactions on Biomedical Engineering</i> , Vol. 39, No. 11, pp. 1192-1206 (Nov. 1992).		
	NPL14	Derfus, D. and PILKINGTON, T., "Effect Of Intracavitary Electrode Position On Endocardial Potential Estimates," <i>IEEE Engineering in Medicine & Biology Society 10th Annual International Conference</i> , pp. 185-186 (1988).		
	NPL15	Desai, J., <i>et al.</i> , "Orthogonal Electrode Catheter Array for Mapping of Endocardial Focal Site of Ventricular Activation," <i>PACE</i> , Vol. 14, Part I, pp. 557-574 (April 1991).		
	NPL16	Downar, E., <i>et al.</i> , "Endocardial Mapping of Ventricular Tachycardia in the Intact Human Ventricle: Evidence for Reentrant Mechanisms," <i>Journal of the American College of Cardiology</i> , Vol. 11, No. 4, pp. 783-91 (April 1988).		
	NPL17	Durrer, D. and VAN DER TWEEL, L., "Spread of Activation in the Left Ventricular Wall of the Dog. II.: Activation Conditions at the Epicardial Surface," <i>American Heart Journal</i> , pp. 192-203 (Aug. 1953).		
	NPL18	Fann, J., <i>et al.</i> , "Endocardial Activation Mapping and Endocardial Pace-Mapping Using a Balloon Apparatus," <i>Am. J. Cardiol.</i> , Vol. 55, pp. 1076-1083 (1985).		
	NPL19	Fenici, R. and MELILLO, G., "Biomagnetically Localizable Multipurpose Catheter And Method For MCG Guided Intracardiac Electrophysiology, Biopsy And Ablation Of Cardiac Arrhythmias," <i>International Journal of Cardiac Imaging</i> , vol. 7, pp. 207-215 (1991).		
	NPL20	Fenici, R., <i>et al.</i> , "Catheter Ablation Of Cardiac Arrhythmias: Magnetocardiographic Localization Of Electrocatheters And Arrhythmogenic Foci," <i>8th International Congress "The New Frontiers of Arrhythmias,"</i> Marilleva, Italy, pp. 723-731 (Jan. 31-Feb. 6, 1988).		
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	NPL21	Fenici, R., <i>et al.</i> , "Clinical Magnetocardiography: 10 Years Experience At The Catholic University," <i>International Journal of Cardiac Imaging</i> , Vol. 7, pp. 151-167 (1991).		
	NPL22	Fenici, R. and MELILLO, G., "Magnetocardiography: Ventricular Arrhythmias," <i>European Heart Journal</i> , vol. 14 (Suppl. E), pp. 53-60 (1993).		
	NPL23	Harada, A., <i>et al.</i> , "Potential Distribution Mapping: New Method For Precise Localization Of Intramural Septal Origin Of Ventricular Tachycardia," <i>Circulation</i> , Vol. 78 (Suppl. III), No. 5, pp. III-137-III-147 (Nov. 1988).		
	NPL24	Hauer, R., <i>et al.</i> , "Endocardial Catheter Mapping: Validation Of A Cineradiographic Method For Accurate Localization Of Left Ventricular Sites," <i>Circulation</i> , Vol. 74, No. 4, pp. 862-868 (October 1986).		
	NPL25	Hauer, R., <i>et al.</i> , "Endocardial Catheter Mapping: Wire Skeleton Technique For Representation Of Computed Arrhythmogenic Sites Compared With Intraoperative Mapping," <i>Circulation</i> , Vol. 74, No. 6, pp. 1346-1354 (Dec. 1986).		
	NPL26	Ideker, R., <i>et al.</i> , "A Computerized Method For The Rapid Display Of Ventricular Activation During The Intraoperative Study Of Arrhythmias," <i>Circulation</i> , Vol. 59, No. 3, pp. 449-458 (March 1979).		
	NPL27	Ideker, R., <i>et al.</i> , "Simultaneous Multichannel Cardiac Mapping Systems," <i>PACE</i> , Vol. 10, pp. 281-292 (March-April 1987).		
	NPL28	Ideker, R., "A Study To Evaluate The Ability Of A Multielectrode Intracavitary Probe To Determine The Site Of Origin Of Ventricular Tachycardia," <i>Basic Arrhythmia Laboratory, Engineering Research Center in Emerging Cardiovascular Technologies</i> , Duke University, pp. 1-3.		
	NPL29	Jackman, W., <i>et al.</i> , "New Catheter Technique For Recording Left Free-Wall Accessory Atrioventricular Pathway Activation: Identification Of Pathway Fiber Orientation," <i>Circulation</i> , Vol. 78, No. 3, pp. 598-611 (Sep. 1988).		
	NPL30	Josephson, M., <i>Clinical Cardiac Electrophysiology: Techniques and Interpretations</i> , 2nd ed., pp. 566-580, 608-615, and 770-783 (1993).		

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